

IN THE CLAIMS:

1. (Currently amended) A method for inhibiting a Th2 cytokine and/or inducing a Th1 cytokine, comprising administering to a subject in need thereof an effective amount of an isolated CpG oligodeoxynucleotide, wherein said oligonucleotide ~~has~~ consists of the sequence of SEQ ID NO:1:

[formula] SYYSACGTTSNYRAWMYTC (SEQ ID NO. 1)

wherein, S is G or C; Y is C or T; N is any one selected from the group consisting of A, G, T and C; R is G or A; W is A or T; and M is A or C, and wherein the CpG oligodeoxynucleotide comprises at least two unmethylated CpG motifs.

2. (Original) The method according to claim 1, wherein the Th2 cytokine is IL-4 or IL-10.

3. (Original) The method according to claim 1, wherein the Th1 cytokine is IL-12 or IFN- γ .

4. (Original) The method according to claim 1, wherein the YS or YR dinucleotide in the formula is CG.

5. (Original) The method according to claim 1, wherein the CpG oligodeoxynucleotide has any one nucleotide sequence selected from the group consisting of SEQ ID NOs. 2-8.

6. (Original) The method according to claim 1, wherein the CpG oligodeoxynucleotide has a phosphodiester or phosphorothioate backbone.

7. (Currently amended) A method for stimulating an immune response, comprising administering to a subject in need thereof an effective amount of an isolated CpG oligodeoxynucleotide, wherein said oligonucleotide ~~has~~ consists of the sequence of SEQ ID NO:1:

[formula] SYYSACGTTSNYRAWMYTC (SEQ ID NO. 1)

wherein S is G or C; Y is C or T; N is any one selected from the group consisting of A, G, T and C; R is G or A; W is A or T; and M is A or C, and wherein the CpG oligodeoxynucleotide comprises at least two unmethylated CpG motifs.

8. (original) The method according to claim 7, wherein the YS or YR dinucleotide in the formula is CG.
9. (original) The method according to claim 7, wherein the CpG oligodeoxynucleotide has any one nucleotide sequence selected from the group consisting of SEQ ID NOs. 2-8.
10. (original) The method according to claim 7, wherein the CpG oligodeoxynucleotide has a phosphodiester or phosphorothioate backbone.
11. (Currently amended) A method for treating ~~a skin disease selected from the group consisting of~~ an inflammatory skin disease in a subject ~~and skin disease associated with a Th2 immune response~~, comprising administering to a subject in need thereof an effective amount of an isolated CpG oligodeoxynucleotide, wherein said oligonucleotide ~~has~~ consists of the sequence of SEQ ID NO:1:
- [formula] SYSSACGTTSNYRAWMYTC (SEQ ID NO. 1)
- wherein S is G or C; Y is C or T; N is any one selected from the group consisting of A, G, T and C; R is G or A; W is A or T; and M is A or C, and wherein the CpG oligodeoxynucleotide comprises at least two unmethylated CpG motifs, wherein said administering is correlated with an improvement of an inflammatory skin disease symptom in said subject.
12. (original) The method according to claim 11, wherein the YS or YR dinucleotide in the above formula is CG.
13. (original) The method according to claim 11, wherein the CpG oligodeoxynucleotide has any one nucleotide sequence selected from the group consisting of SEQ ID NOs. 2-8.
14. (Previously presented) The method according to claim 11, wherein the CpG oligodeoxynucleotide has a phosphodiester or phosphorothioate backbone.

15. (Currently amended) The method according to claim 11, wherein the inflammatory skin disease is selected from the group consisting of atopic dermatitis, allergic skin disease, and viral skin disease ~~and skin cancer~~.

16. (Currently amended) A composition for treating or preventing an inflammatory skin disease in a subject, comprising an isolated CpG oligodeoxynucleotide, wherein said oligonucleotide ~~has~~ consists of the sequence of SEQ ID NO:1 :

[formula] SYYSSACGTTSNYRAWMYTC (SEQ ID NO. 1)

wherein S is G or C; Y is C or T; N is any one selected from the group consisting of A, G, T and C; R is G or A; W is A or T; and M is A or C, and wherein the CpG oligodeoxynucleotide comprises at least two unmethylated CpG motifs.

17. (Currently amended) A composition for stimulating an immune response, comprising an isolated CpG oligodeoxynucleotide, wherein said oligonucleotide ~~has~~ consists of the sequence of SEQ ID NO:1:

[formula] SYYSSACGTTSNYRAWMYTC (SEQ ID NO. 1)

wherein S is G or C; Y is C or T; N is any one selected from the group consisting of A, G, T and C; R is G or A; W is A or T; and M is A or C, and wherein the CpG oligodeoxynucleotide comprises at least two unmethylated CpG motifs.

18-21. (canceled)